

Set	Items	Description
S1	44	AU=(MATTHIES D? OR MATTHIES, D?)
S2	652781	FLAT? ? OR FLATTEN? ? OR FLATTENING? ?
S3	1118984	SHEET? ?
S4	9	S1 AND S2 AND S3
S5	9	IDPAT (sorted in duplicate/non-duplicate order)
S6	9	IDPAT (primary/non-duplicate records only)

? show files

File 347:JAPIO Oct 1976-2003/Mar (Updated 030703)
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File 348:EUROPEAN PATENTS 1978-2003/Jul W01
(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030710,UT=20030703
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File 350:Derwent WPIX 1963-2003/UD,UM &UP=200345
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6/9/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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015355789 **Image available**
WPI Acc No: 2003-416727/200339
XRAM Acc No: C03-110287
XRPX Acc No: N03-332187

Manufacture of display for electronic devices, involves temporarily flattening a sheet, processing the sheet, and securing the sheet to second sheet while continuing to hold the sheet in flattened configuration

Patent Assignee: MATTHIES D L (MATT-I)

Inventor: MATTHIES D L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030011108	A1	20030116	US 2001904269	A	20010712	200339 B

Priority Applications (No Type Date): US 2001904269 A 20010712

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030011108	A1	7	B29C-043/02	

Abstract (Basic): US 20030011108 A1

NOVELTY - A display is made by temporarily flattening a sheet; processing the sheet; and securing the sheet to a second sheet while continuing to hold the sheet in a flattened configuration.

USE - For manufacturing a display for electronic devices.

ADVANTAGE - The method ensures good surface-to-surface contact for electrical connections. By processing the sheet prone to warpage in a flattened configuration, the occurrence of stress-induced cracking when the sheet is applied to a rigid planar surface is reduced. Further, a distorted sheet may be processed economically while still resulting in a final product, which is regular, flat and planar.

DESCRIPTION OF DRAWING(S) - The figure is a cross-sectional view of a pair of chucks in opposition.

Vacuum chuck (18a, 18b)

pp; 7 DwgNo 2/8

Technology Focus:

TECHNOLOGY FOCUS - ELECTRONICS - Preferred Method: The temporarily flattening step includes placing the sheet in a vacuum chuck (18a, 18b), and applying a vacuum to flatten the sheet. The processing step includes applying row and column electrodes to the sheet; and applying a light emitting material to the sheet. The application of the light emitting material includes applying an organic light emitting material between the row and column electrodes.

The method further includes processing the second sheet in a flattened configuration and in the chuck; processing both the first and second sheets in the chuck; combining the sheets using the chucks; securing the sheets to an integrator plate; surface mounting the first and second sheets in the chucks. The sheet is secured to a planar surface or a glass panel.

Preferred Component: The sheet can be a warped sheet or a ceramic sheet.

Title Terms: MANUFACTURE; DISPLAY; ELECTRONIC; DEVICE; TEMPORARY; FLATTEN; SHEET; PROCESS; SHEET; SECURE; SHEET; SECOND; SHEET; CONTINUE; HOLD; SHEET; FLATTEN; CONFIGURATION

Derwent Class: L03; U12; U14

International Patent Class (Main): B29C-043/02

International Patent Class (Additional): C03B-023/02
File Segment: CPI; EPI
Manual Codes (CPI/A-N): L03-G05
Manual Codes (EPI/S-X): U12-A01A1X; U12-A01A2; U12-A01A3; U12-A01A6;
U14-J01; U14-J02D2
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6/AU,AB,AD,PN,PD,AN/2 (Item 2 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

Inventor(s):

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200247310 A2-A3 20020613 (WO 0247310)

Application: WO 2001US46455 20011109 (PCT/WO US0146455)

English Abstract

A tiled display structure (100) is fabricated on a single substrate that also serves as a circuit board (130) containing electronic components. Electrodes are formed on the substrate and the remainder of the display section (310) is formed on the electrodes (322, 328). The electronic components are mounted on the substrate using exceptionally long leads (132) to assist in the thermal management of tiles.

French Abstract

La presente invention concerne un structure d'affichage a paves realisee sur un substrat unique servant egalement de carte de circuit imprimé comportant des composants electroniques. Les electrodes sont formees sur le substrat et le reste de la section d'affichage est constitue sur les electrodes. Les elements de pixel utilisent un materiel d'affichage a motifs, et occupent seulement une portion de la structure de pixels. Les composants electroniques sont montes sur le substrat au moyen de fils particulierement longs contribuant ainsi au controle thermique des paves. Dans une variante, chaque pave inclut une structure a ailettes sur la surface de la carte de circuit imprimé sur laquelle les composants electroniques sont montes et ne sont pas en contact avec le substrat. Dans une autre variante, chaque pave comprend une carte de circuit imprimé flexible montee sur le substrat, une portion de laquelle est repliee en eloignement du substrat. Les composants electroniques sont relies a cette portion de cartes de circuits imprimés flexibles de sorte que les composants ne soient pas en contact avec le substrat contribuant ainsi le controle thermique.

6/AU,AB,AD,PN,PD,AN/5 (Item 5 from file: 349)
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Patent and Priority Information (Country, Number, Date):

Patent: WO 200102882 A1 20010111 (WO 0102882)

Application: WO 2000US16927 20000620 (PCT/WO US0016927)

English Abstract

A lenticular screen component of a rear projection display screen has lenticular elements formed on a viewer surface. Identical lenticular elements cover the entire lenticular screen component and are repeated horizontally at a constant displacement. A given lenticular element includes a pair of reflective side portions and a refractive tip portion interposed between the side portions. One of the pair of side portions forms a sloped region at a joint between the one side portion and a side portion of an adjacent lenticular element. The sloped region is at an angle in a range between 5 and 15 degrees with respect to the first axis.

The one side portion is covered with a reflective coating in at least a region of the one side portion that includes the joint. The pair of reflective side portions reflects light rays incoming from a projector towards the refractive tip portion for refracting the reflected light rays via a surface of the refractive tip portion facing a viewer. Each refracted light ray is refracted by a convex surface of the refractive tip portion.

French Abstract

Cette invention se rapporte à un composant lenticulaire d'un écran d'affichage à retroprojection, qui comporte des éléments lenticulaires formés sur une surface de visualisation. Des éléments lenticulaires identiques couvrent la totalité du composant lenticulaire et se répètent horizontalement à intervalles constants. Un élément lenticulaire donne comprend une paire de parties latérales réfléchissantes et une partie de pointe réfractive placée entre les parties latérales. L'une des deux parties latérales forme une zone en pente au niveau d'une jonction entre cette partie latérale et une partie latérale d'un élément lenticulaire adjacent. La zone en pente forme un angle compris entre 5 et 15 degrés par rapport au premier axe. L'une des parties latérales est couverte d'un revêtement réfléchissant dans au moins l'une de ses zones contenant la jonction. La paire des parties latérales réfléchissantes réfléchit les rayons lumineux provenant d'un projecteur en direction de la partie de pointe réfractive, en vue de produire la réfraction des rayons lumineux réfléchis via une surface de la partie de pointe réfractive faisant face à l'observateur. Chaque rayon lumineux réfracté est réfracté par une surface convexe de la partie de pointe réfractive.

6/AU, AB, AD, PN, PD, AN/6 (Item 6 from file: 349)
DIALOG(R) File 349: (c) 2003 WIPO/Univentio. All rts. reserv.

Inventor(s) :

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Patent and Priority Information (Country, Number, Date) :

Patent: WO 9941788 A1 19990819
Application: WO 99US3375 19990217 (PCT/WO US9903375)

English Abstract

A display device having features which enhance the contrast of displayed images includes a pixel structure that defines an active pixel area and an inactive pixel area. The display device may be an emissive device such as an OLED or electroluminescent device, a transmissive device such as a liquid crystal light-valve device or a reflective device, such as a Bistable, Reflective Cholesteric (BRC) liquid crystal device. The ratio of the active pixel area to the total pixel area is less than 50 percent. The display device includes a transparent cover plate having a black matrix formed on the viewer side of the cover plate. The display device may be a tiled display in which case the black matrix is formed on an integrator plate to which the individual tiles are bound to form the complete display device. For reflective or emissive display materials, the display device includes an electronics section including a circuit board which provides driving signals for the pixels of the display device. The electronics section is bound to the display section by an adhesive. To provide a light-absorptive background for the active pixel elements, the circuit board or the adhesive are colored black. The individual pixel elements of the display device include four sub-pixel components separated by portions of the inactive pixel area, which four

sub-pixel components together define the active area of the pixel. A lens system is provided on the viewer surface of the display to concentrate light emitted by the active area of the pixel elements into a smaller area, thus decreasing the aperture of the display. Areas between the lenses on the viewer surface of the display are coated with a black material to form a black matrix. A black material is selectively deposited on the front cover plate before applying the metal row electrodes to prevent the row electrodes from providing a reflective surface to the viewer.

French Abstract

Un affichage presente des caracteristiques ameliorant le contraste des images affichees, et comprend une structure de pixels qui definit une zone de pixels actifs et une zone de pixels inactifs. L'affichage peut etre un dispositif du type photoemetteur tel qu'un dispositif electroluminescent organique (OLED) ou un autre dispositif electroluminescent, un dispositif phototransmetteur tel qu'une photovalve a cristal liquide bistable de type BRC (Bistable Reflective Cholesteric). Le rapport de la superficie de pixels actifs est inferieur a 50 % de la superficie totale de pixels. L'affichage comprend un cache transparent et porte sur son cote apparent une matrice noire. Cet affichage peut etre un affichage par paves, dans ce cas, la matrice noire est formee sur une plaque d'integration a laquelle sont relies les paves individuels de maniere a former un affichage complet. Dans les materiaux d'affichages emissifs ou reflecteurs, l'affichage comprend une partie electronique comportant une plaquette de circuit qui produit des signaux pilotes pour les pixels de l'affichage. Cette partie electronique est reliee a la partie d'affichage par un adhesif. Pour fournir aux pixels actifs un fond absorbeur de lumiere, on teint en noir la plaquette de circuit ou l'adhesif. Chaque pixel comprend quatre composants sous-pixels separees par des parties de la surface de pixels inactifs, ces sous-pixels formant ensemble la surface active des pixels. Un systeme de lentilles monte sur la surface visible de l'affichage sert a concentrer la lumiere emise par la surface active des pixels pour aboutir a une superficie plus petite, reduisant ainsi l'ouverture de l'affichage. Des surfaces situees entre les lentilles sur la surface visible de l'affichage sont recouvertes d'une matiere noire pour former une matrice noire. On depose selectivement une matiere noire sur le cache frontal avant d'appliquer la rangee d'electrodes metalliques, de maniere a empêcher que la rangee d'electrodes ne forme une face de reflexion tournee vers l'observateur.

6/AU,AB,AD,PN,PD,AN/9 (Item 9 from file: 349)
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Patent and Priority Information (Country, Number, Date) :

Patent: WO 9728554 A1 19970807
Application: WO 97US542 19970130 (PCT/WO US9700542)

English Abstract

A plasma display device includes a front panel (54) having a glass body (38) secured to a surface of a substrate (32). The glass body has a plurality of channels (40) in its exposed surface with upstanding ribs (44) being between the channels. Conductive first electrodes (48) are on the body with each electrode extending along the bottom of a separate channel. The first electrodes are preferably embedded in the glass body.

A transparent front panel is located over a back panel (31) and is seated on and secured to the glass body. A plurality of spaced, parallel second electrodes extend between the front panel and the back panel substantially orthogonally to the first electrodes. Phosphors which emit different colors are coated on the channels and the channels are filled with a plasma gas.

French Abstract

Un ecran a plasma comporte un panneau frontal (54) pourvu d'un corps en verre (38) fixe a la surface d'un substrat (32). La face exposee de ce corps en verre est pourvue de plusieurs canaux (40) que separent des nervures dressees (44). Le corps comporte une premiere serie d'electrodes conductrices (48), chacune s'étendant sur le fond d'un canal distinct. Ces premières electrodes sont, de préférence, encastrées dans le corps en verre. Un panneau frontal transparent, qui se situe au-dessus d'un panneau de fond (31), s'appuie contre le corps en verre et lui est fixe. Plusieurs secondes electrodes, séparées et parallèles les unes aux autres, s'étendent entre le panneau frontal et le panneau de fond selon un plan sensiblement perpendiculaire a celui des premières electrodes. Les canaux, qui sont revêtus de luminophores émettant des couleurs différentes, sont remplis d'un gaz plasma.

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